

## ABSTRACT OF THE DISCLOSURE

The present invention relates to a system and method for signaling among a plurality of devices via a communication carrier over a noisy medium such as a power line and particularly relates to an innovative method and system for high speed signaling using an innovative modulating scheme. The scheme is particularly well adapted for signaling over multiple channels and over direct current (DC) power lines. At the transmitter end, a modem modulates data to be transmitted according to a modulation scheme and a signaling shifter modifies the carrier according to a modification scheme. At the receiver end, a modem demodulates the data according to the modulation scheme and a detector detects the signal in accordance with the modification scheme. Signals may be received over multiple channels. A signal is sent over a subset of the channels. Remaining channels can be used for competing signals avoiding interference. The channel chosen for sending a signal may also indicate signal priority. An innovative device is presenting for testing communication over DC power lines with adjustable attributes.